## ABSTRACT OF THE DISCLOSURE

In a method and MRT device for planning and generating planar MRT slices based on deformation-free corrected MRT overview images, the MRT device having a nonlinear gradient system with data with regard to the nonlinear variations being stored, at least one MRT overview image is generated, MRT overview image is corrected on the basis of the stored data with regard to the nonlinear variations, the ensuing variations of a planar slice selected by the operator in the corrected MRT overview image are determined on the basis of the stored data with regard to the nonlinear variations, an MR sequence with a radio-frequency excitation pulse as well as gradient pulses is calculated, such that, given simultaneous radiation of these pulses, the slice to be acquired undergoes a curvature in the exposure that is inverse to the nonlinear variations of the MRT overview image, and data for the planar slice are acquired using the calculated MR sequence.

CH1\ 408\$271.1